



# TAOGLAS®



# Datasheet

**Part No:**  
**GW.48.A151**

**Description**

Black 2.4 / 5.8 / 7.125GHz

Rubber Duck Dipole Antenna with RP-SMA(M)

**Features:**

2.4/5.8/7.125GHz Band Operation

UV Resistant, Robust TPEE Housing

IP65 Waterproof Enclosure

IK05 Impact Rated Enclosure

Connector Mount: RP-SMA(M)

Dimensions: 89.5mm x 7.5mm Diameter

RoHS & REACH compliant

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## 1. Introduction



The GW.48 dual-band 2.4/5.8/7.25GHz RP-SMA(M) mount dipole antenna is designed for superior performance and reliability. With an omnidirectional radiation pattern and excellent efficiency and gain on both 2.4 GHz, 5.8 & 7.125GHz bands.

At just 89.5mm in height, the GW.48 is a great smaller form factor solution for Bluetooth® and Wireless LAN networks. The IP67 rated enclosure makes it suitable for both indoor and outdoor applications. The flexible IK05 rated TPEE enclosure is impact resistant and durable and has the added benefit of UV resistance, allowing it to meet the needs of demanding outdoor applications.

Upon testing of any of our antennas with your device and a selection of appropriate layout, integration technique, or cable, Taoglas can make sure any of our antennas' peak gain will be below the peak gain limits. Taoglas can then issue a specification and/or report for the selected antenna in your device that will clearly show it complying with the peak gain limits, so you can be assured you are meeting regulatory requirements for that module.

Choosing a Taoglas antenna with a higher peak gain than what is specified by the module manufacturer and enlisting our help will ensure you are getting the best performance possible without exceeding the peak gain limits.

Contact your regional Taoglas customer support team for further information.

## 2. Specification

Wi-Fi Electrical								
Band	Frequency (MHz)	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
Wi-Fi - 2GHz	2400-2500	80.6	-0.93	1.82	50 $\Omega$	Linear	Omni	2W
Wi-Fi - 5GHz	5150-5850	70.9	-1.49	3.28				
Wi-Fi - 6GHz	5925-7125	62.1	-2.07	4.23				

Mechanical	
Antenna Length	89.5 mm
Antenna Diameter	7.5 mm
Weight	9.5g
Antenna Body Material	TPEE
Connector	RP-SMA(M)
Waterproof	IP65
Pendulum Hammer Test [IEC62262]	IK05

Environmental	
Temperature Range	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

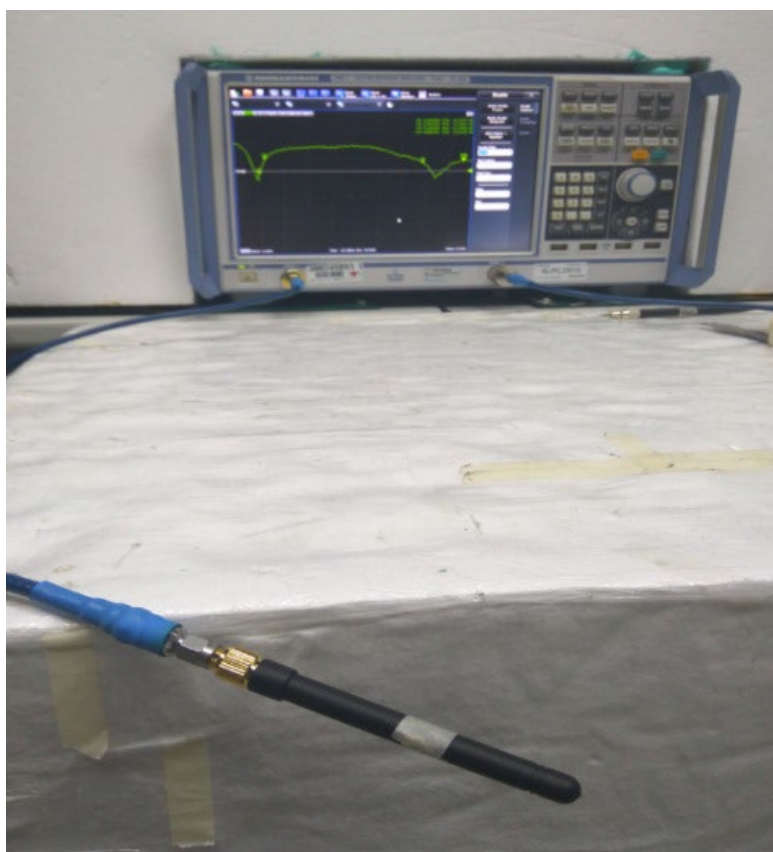
## 3. Antenna Characteristics

### 3.1 Test Setup

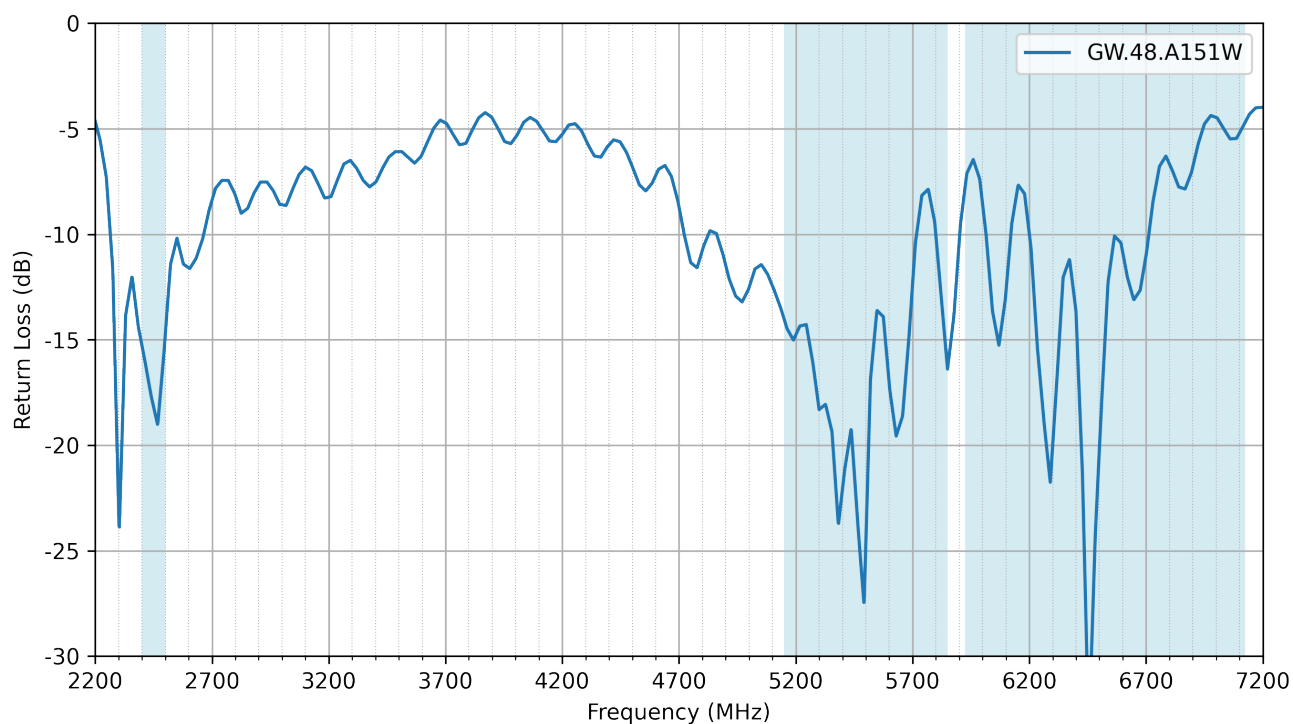
AUT



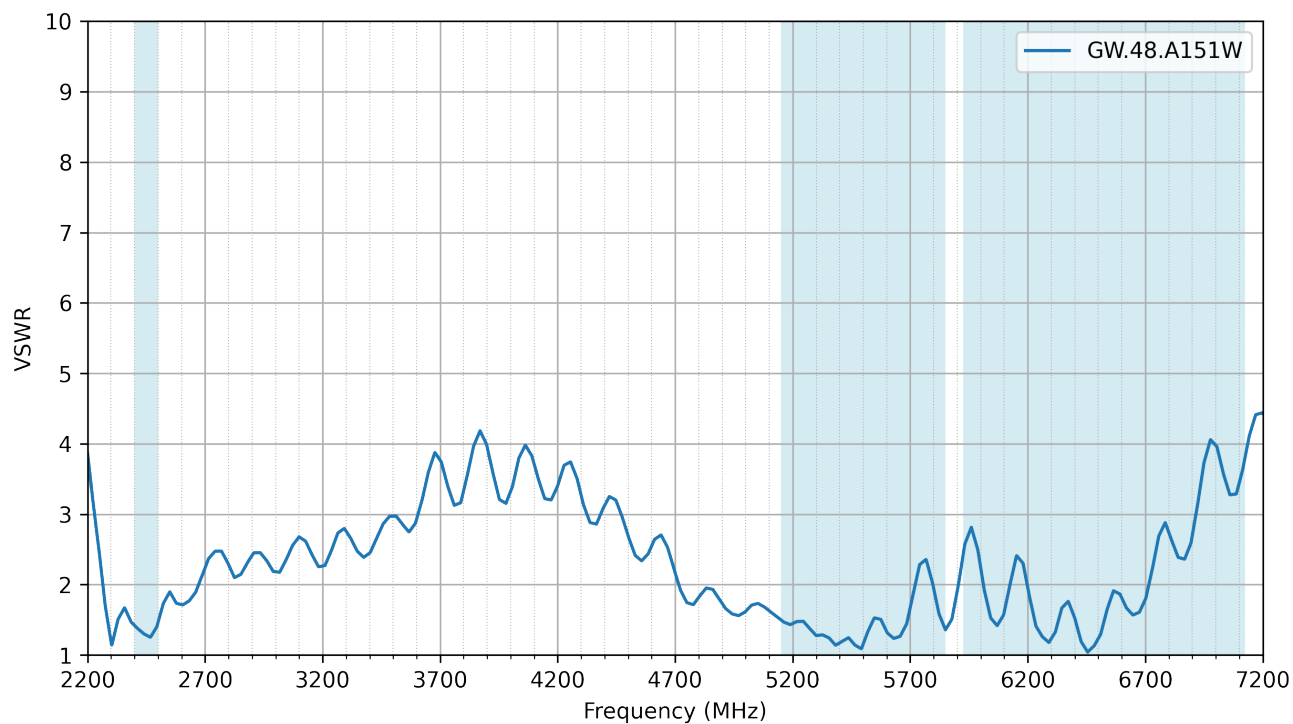
Vector Network Analyzer



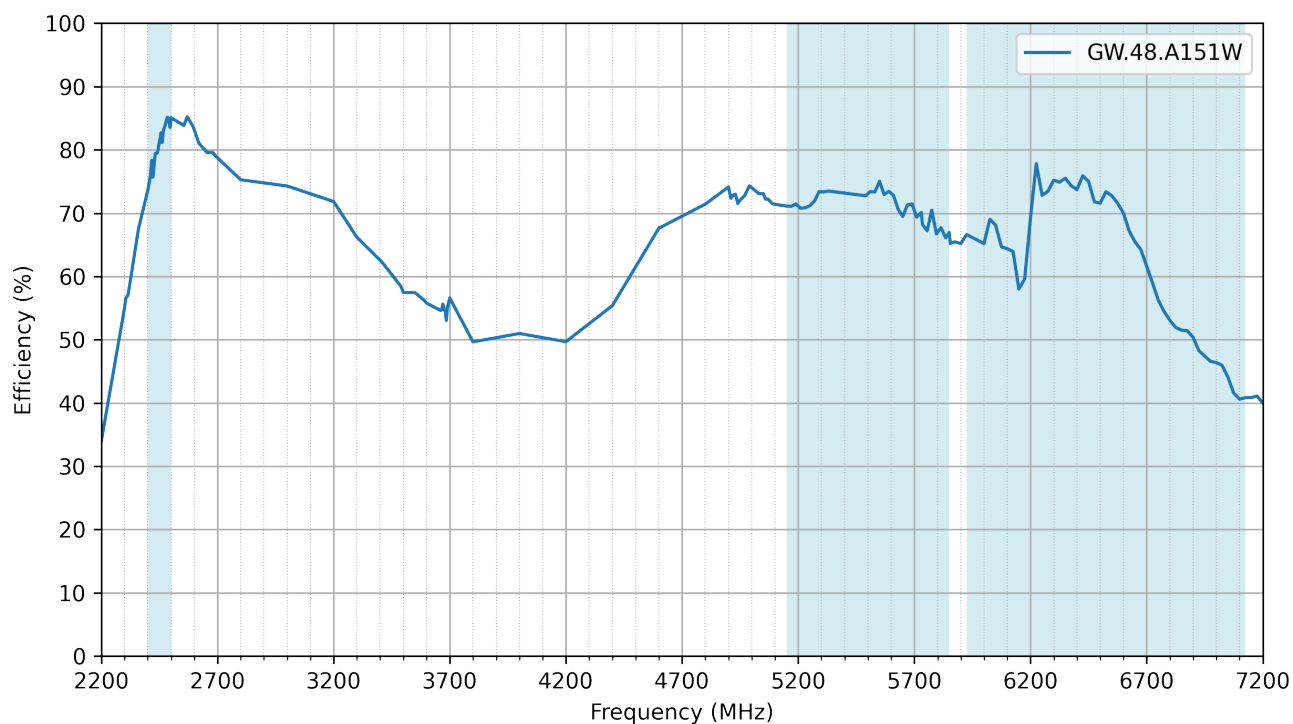
### 3.2 Return Loss



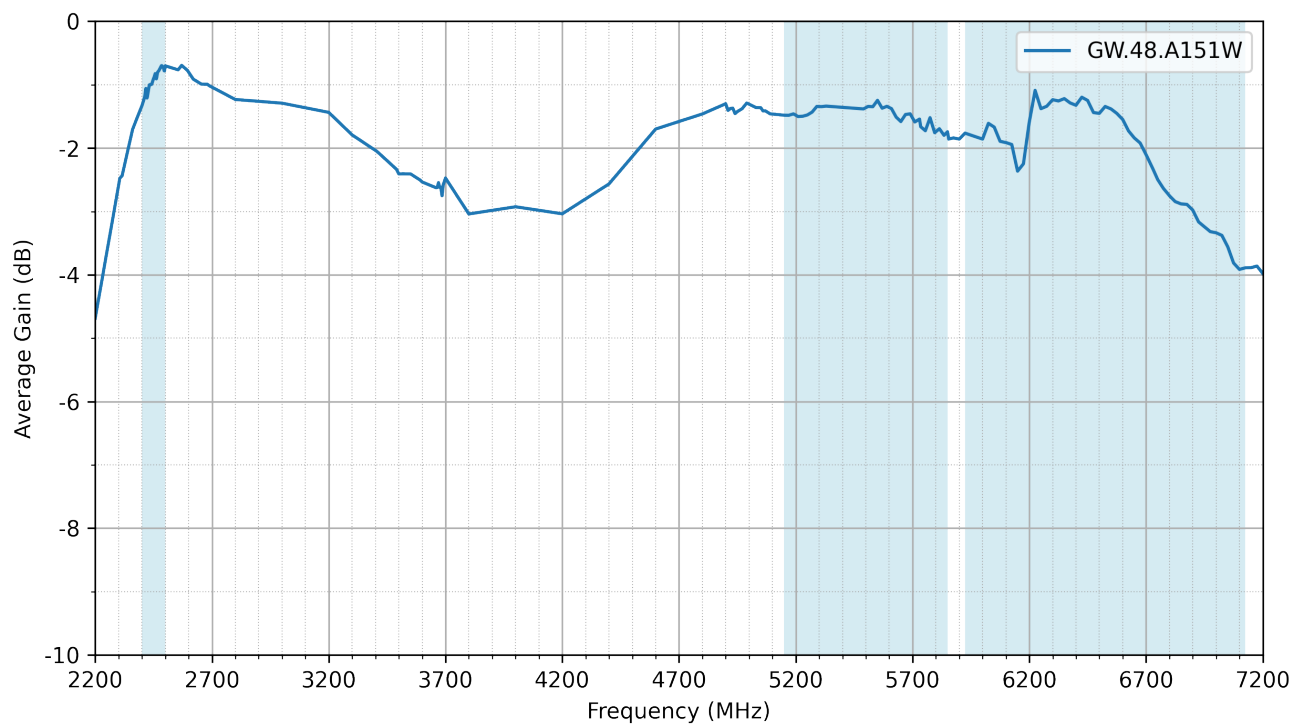
### 3.3 VSWR



### 3.4 Efficiency

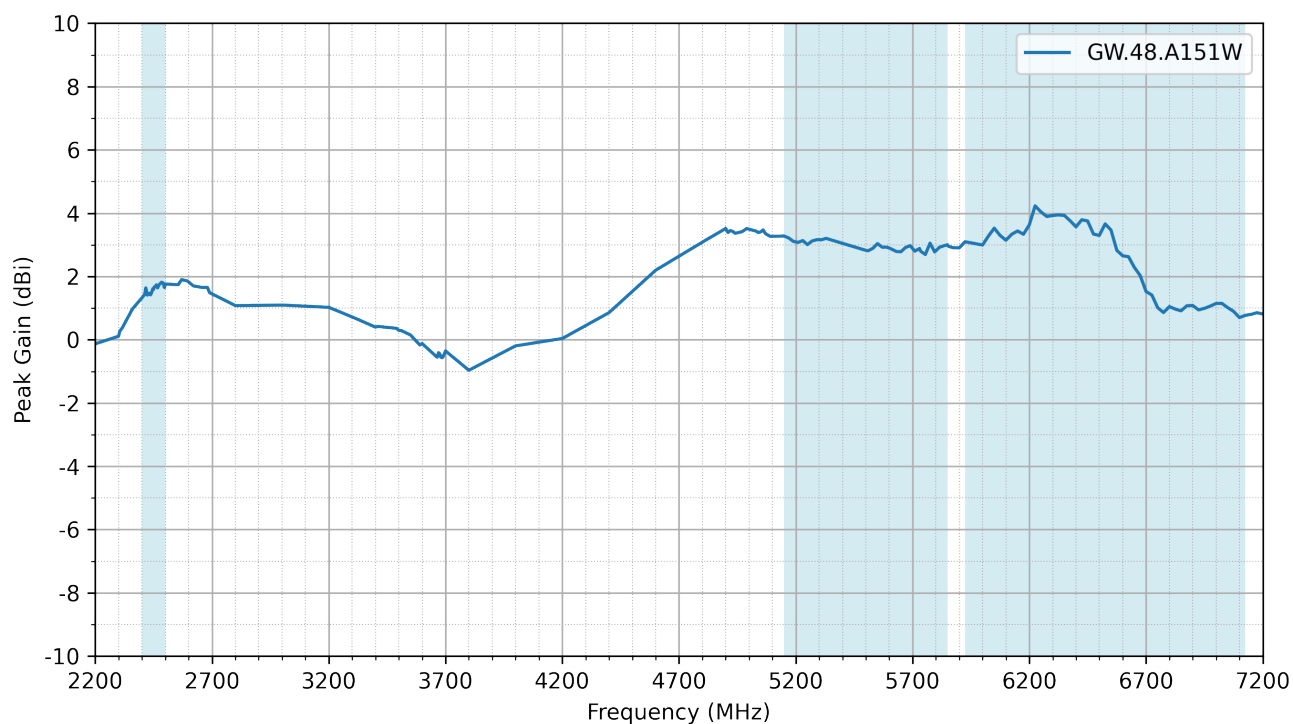


### 3.5 Average Gain





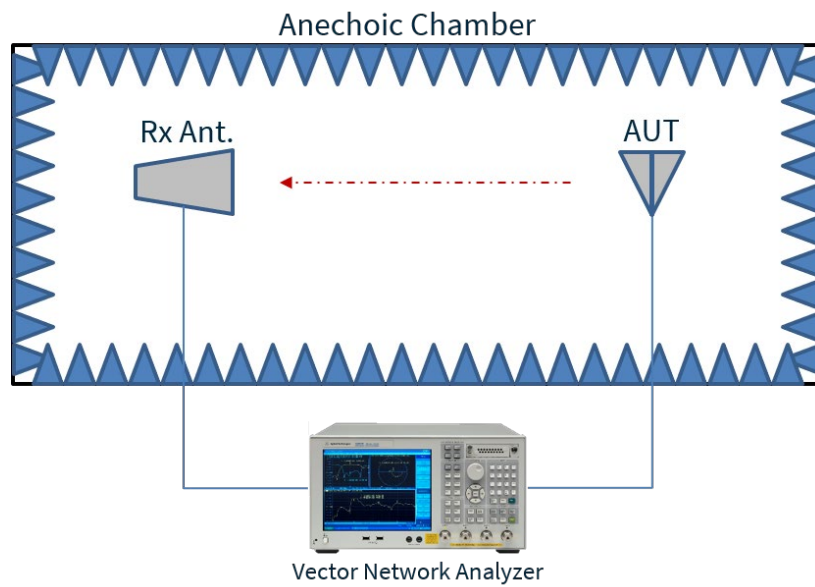
### 3.6 Peak Gain



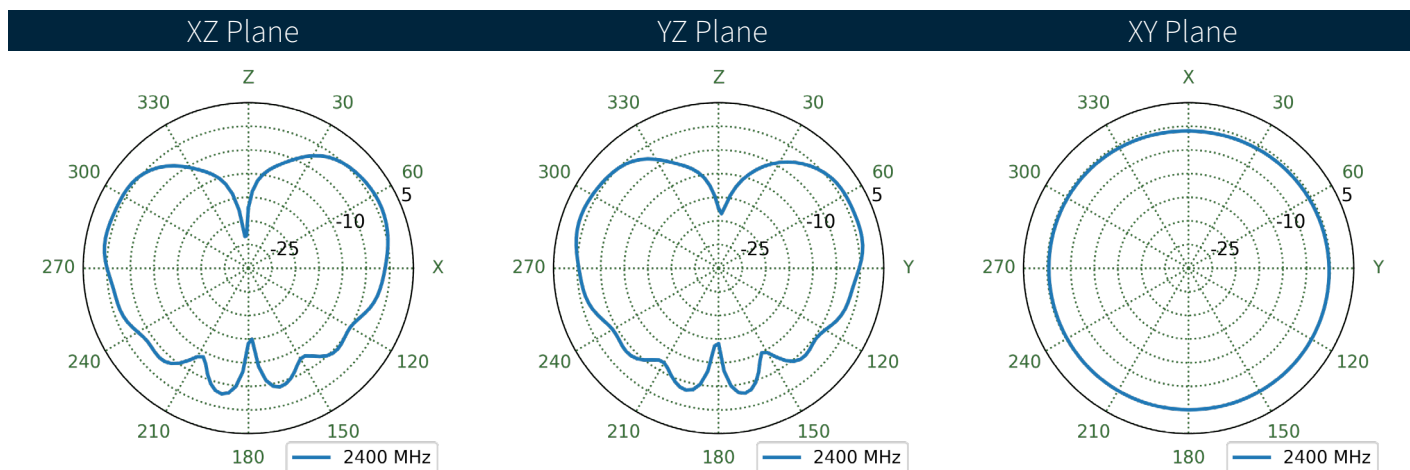
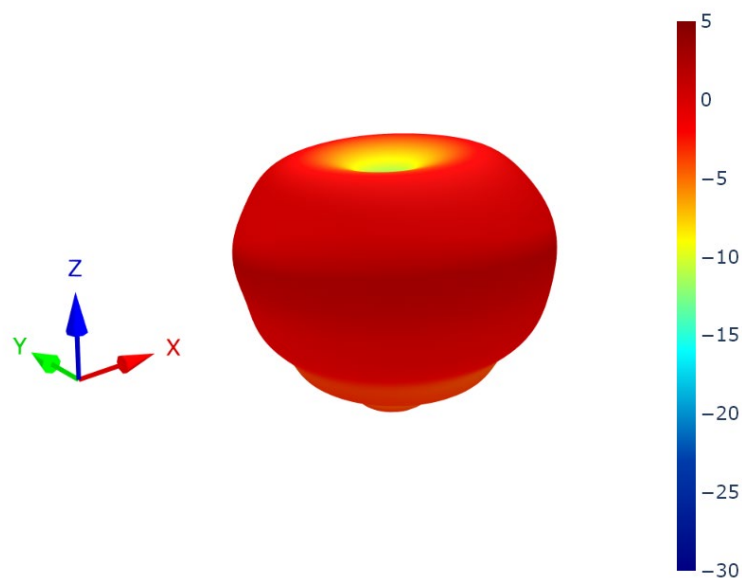


## 4. Radiation Patterns

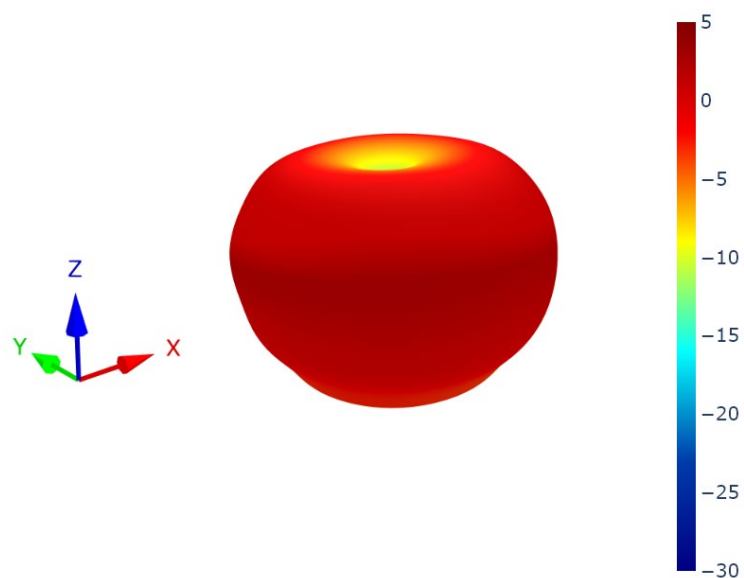
### 4.1 Test Setup



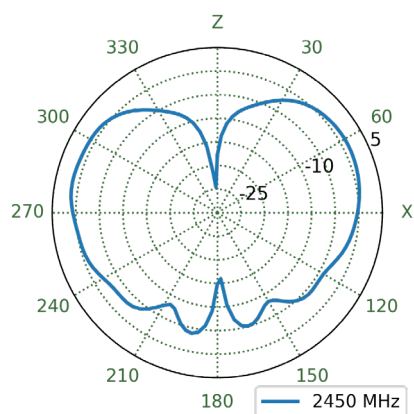
## 4.2 GW.48.A151 Patterns at 2400 MHz



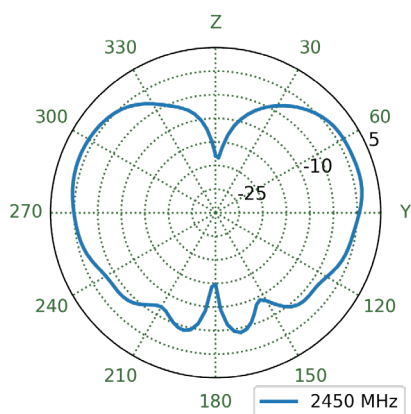
### 4.3 GW.48.A151 Patterns at 2450 MHz



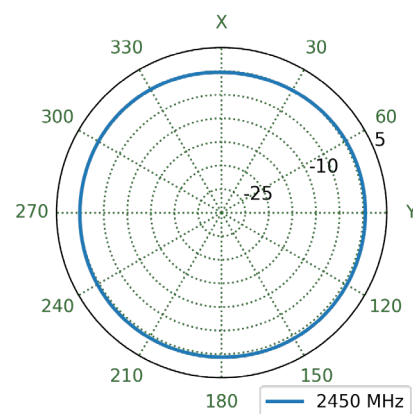
XZ Plane



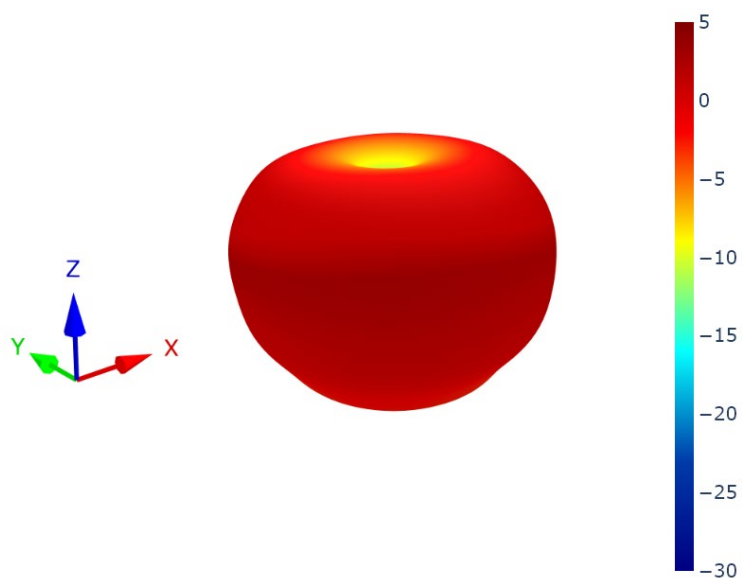
YZ Plane



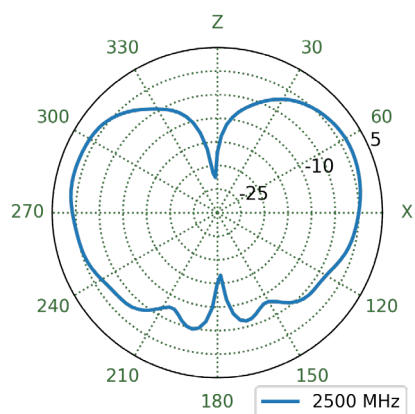
XY Plane



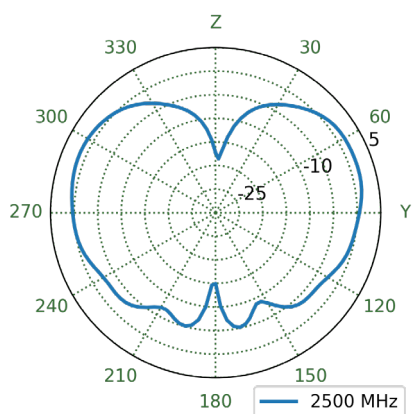
## 4.4 GW.48.A151 Patterns at 2500 MHz



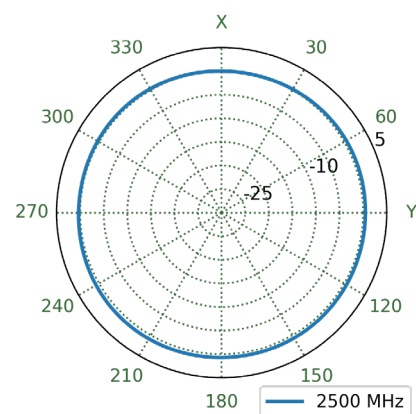
XZ Plane



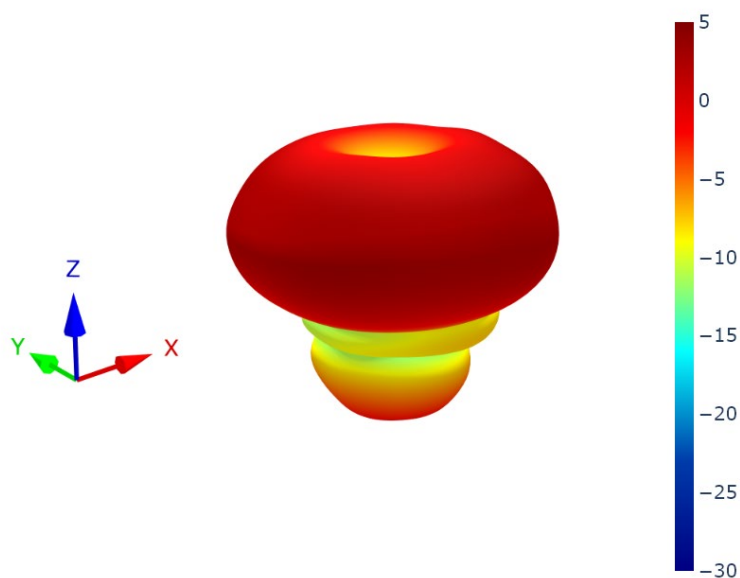
YZ Plane



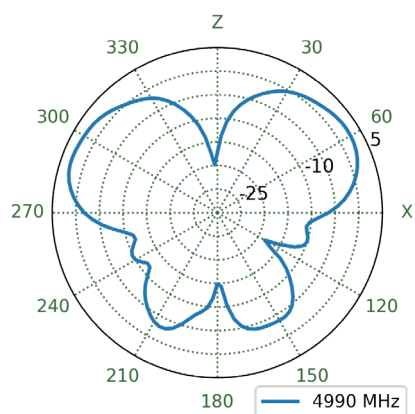
XY Plane



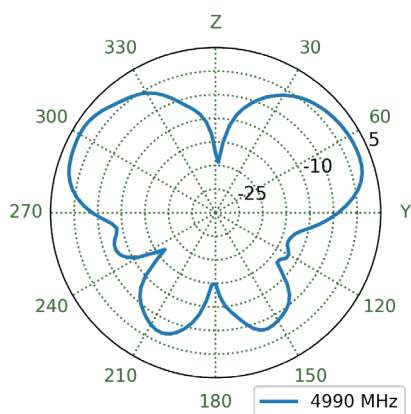
## 4.5 GW.48.A151 Patterns at 5000 MHz



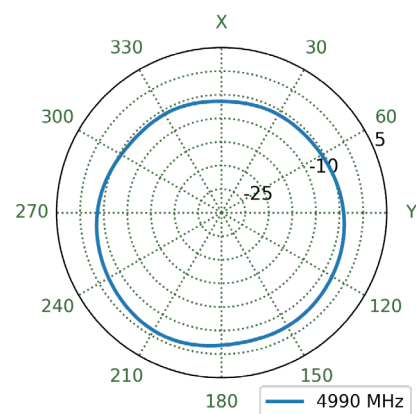
XZ Plane



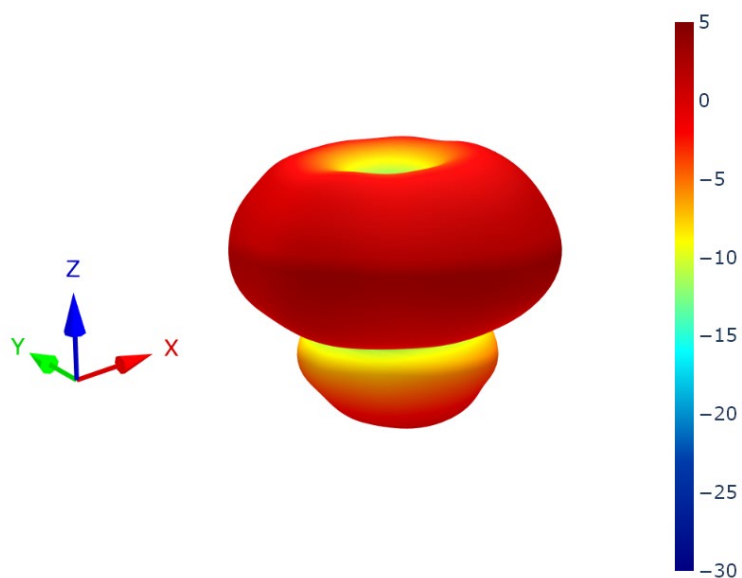
YZ Plane



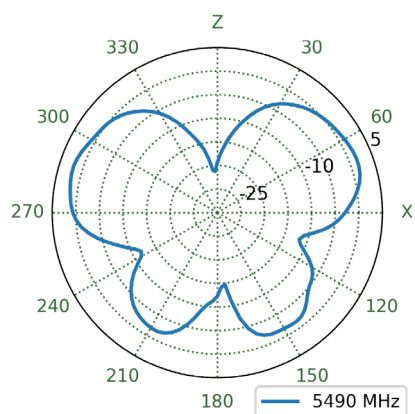
XY Plane



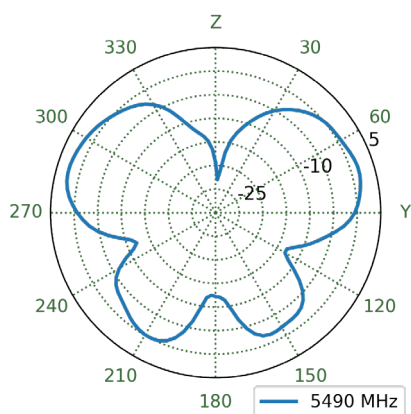
## 4.6 GW.48.A151 Patterns at 5500 MHz



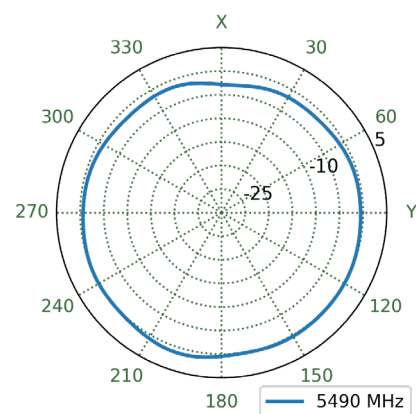
XZ Plane



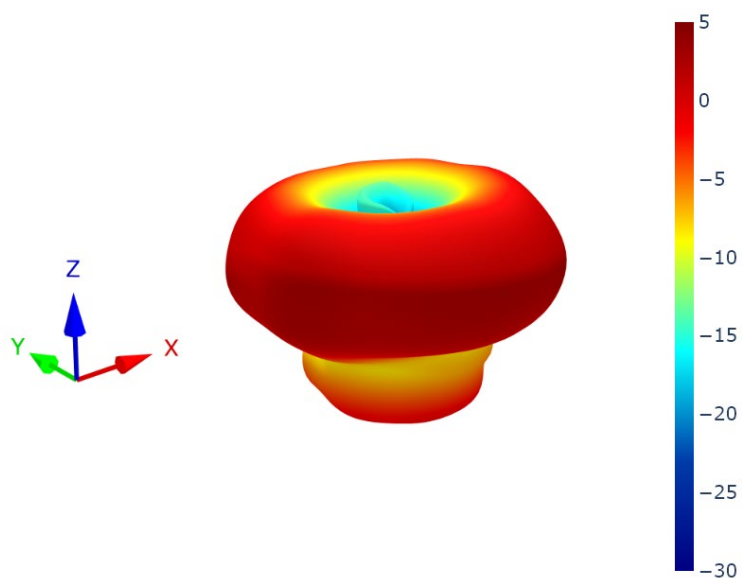
YZ Plane



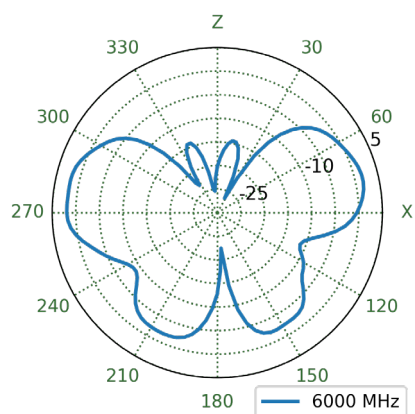
XY Plane



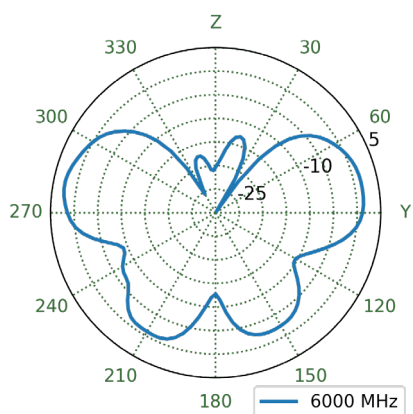
## 4.7 GW.48.A151 Patterns at 6000 MHz



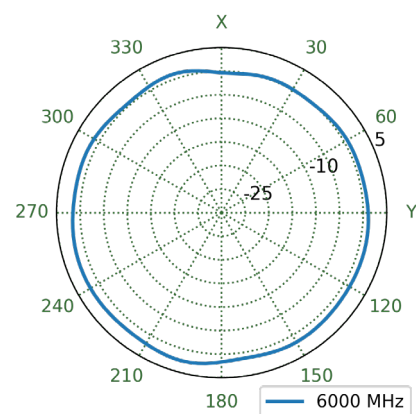
XZ Plane



YZ Plane

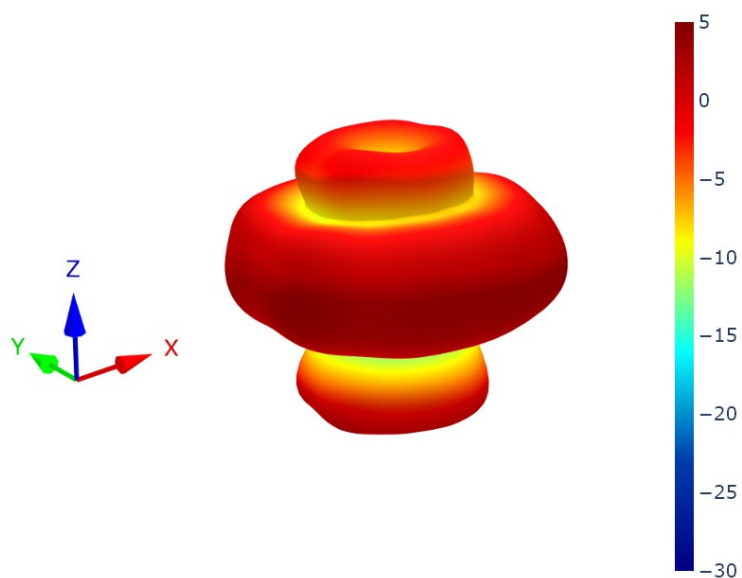


XY Plane

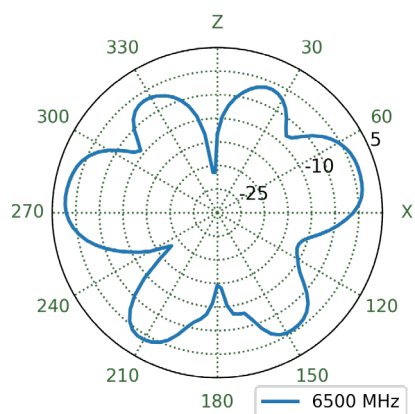




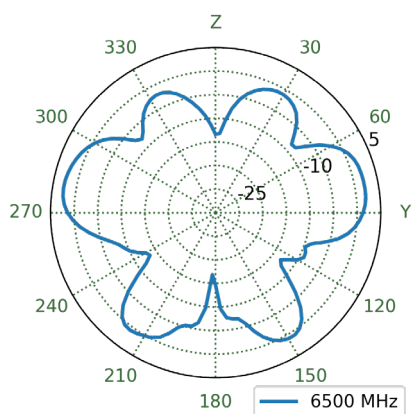
## 4.8 GW.48.A151 Patterns at 6500 MHz



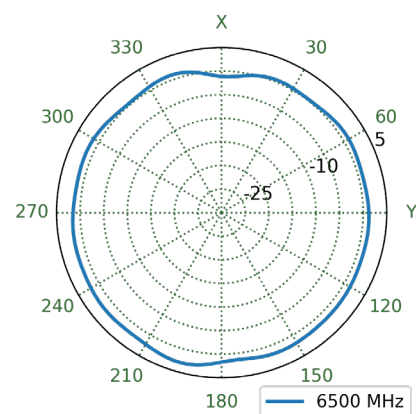
XZ Plane



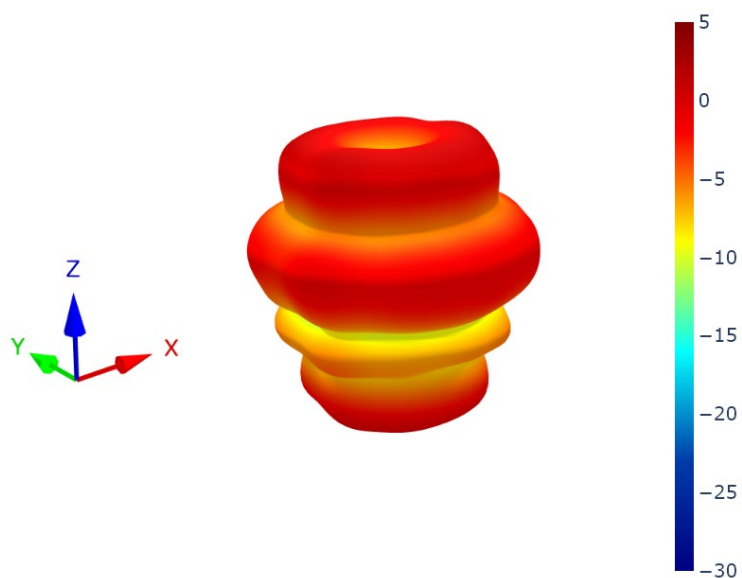
YZ Plane



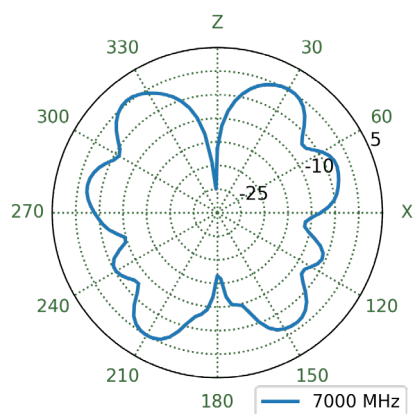
XY Plane



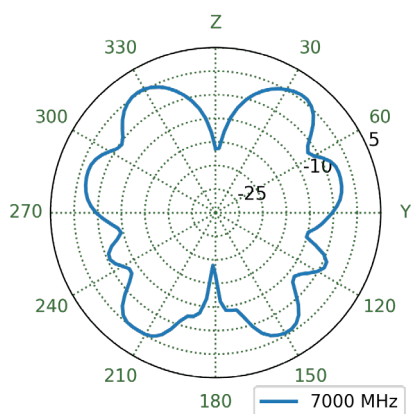
## 4.9 GW.48.A151 Patterns at 7000 MHz



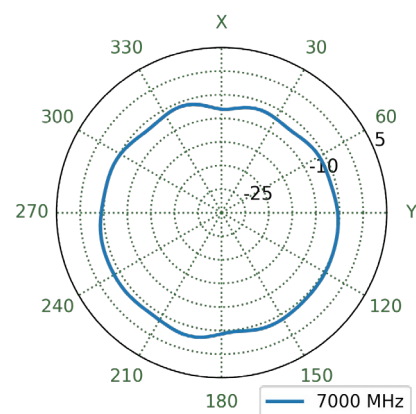
XZ Plane



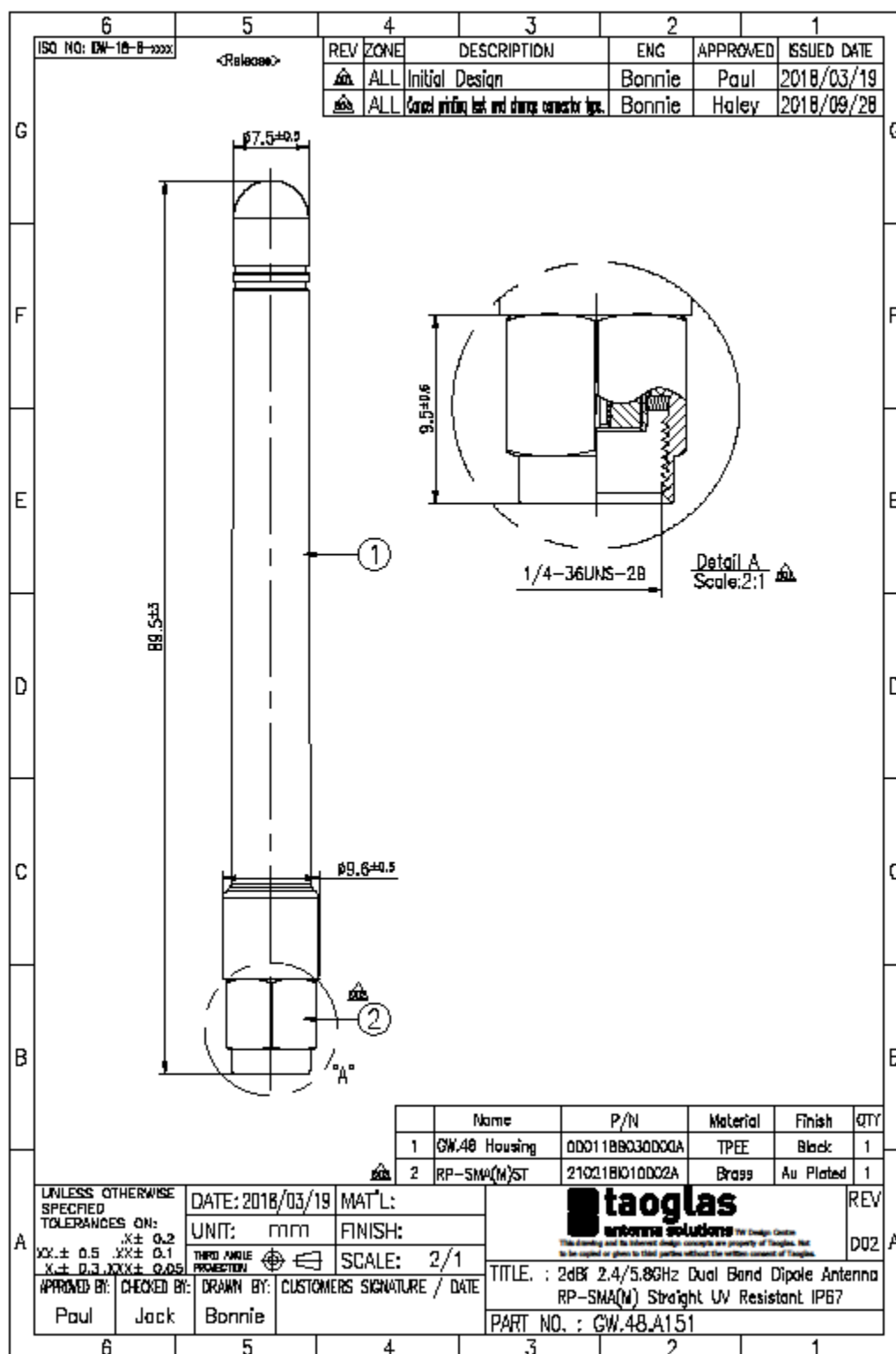
YZ Plane



XY Plane

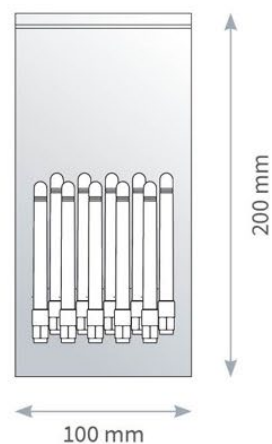


## 5. Mechanical Drawing

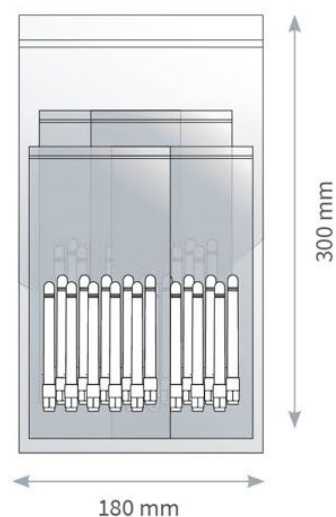


## 6. Packaging

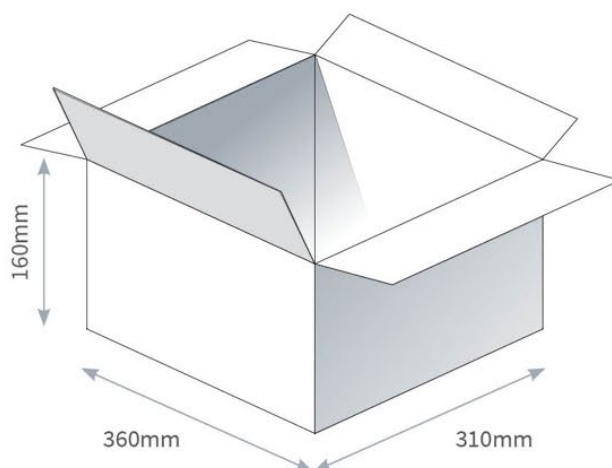
10 pcs GW.48 per PE Bag  
Bag Dimensions - 100 x 200 mm  
Weight - 86g



10 Small PE Bag per Large Bag  
100 pcs GW.48 per PE Large Bag  
Bag Dimensions - 300 x 180mm  
Weight - 865g



1000 pcs GW.48 per carton  
Carton - 360 x 310 x 160mm  
Weight - 9.6Kg



Changelog for the datasheet

SPE-18-8-120 – GW.48.A151

Revision: B (Current Version)

Date: 2023-03-20  
Changes: Full datasheet update

Changes Made by: Gary West

Previous Revisions

Revision: A (Original First Release)

Date: 2018-11-30  
Notes:

Author: Unknown



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